WHAT IS CLAIMED IS:

1. A tire air pressure monitoring system comprising:

a plurality of sensor units each provided in each of tires of a vehicle for measuring an air pressure of the corresponding tire and for transmitting a transmission signal including the air pressure measurement value; and

a monitoring unit for receiving said transmission signal from each of said plurality of sensor units to monitor an air pressure state of each of said tires on the basis of the air pressure measurement value included in said transmission signal,

wherein said monitoring unit includes a plurality of transmitting means provided in a state associated with said plurality of sensor units, respectively, and each of said transmitting means transmits an instruction signal calling for the transmission of said transmission signal and has a transmission zone so that said instruction signal reaches only the corresponding sensor unit, and

each of said plurality of sensor units includes receiving means for receiving said instruction signal and, when receiving said instruction signal, said receiving means transmits said transmission signal in response to said instruction signal.

2. The system according to claim 1, wherein each of said transmitting means has a transmission coil antenna made to transmit said instruction signal in a manner such that a magnetic field is used as a medium, and said transmission coil antenna is located in the vicinity of an axle for the corresponding tire wheel or around the corresponding tire, and the central axis of said transmission coil antenna is located along said axle so that a magnetic flux goes in a direction of said axle, while said receiving means of each of said sensor units has a reception coil antenna for receiving said magnetic flux, and said reception coil antenna is located so that the central axis of said reception coil antenna coincides in direction with the central axis of said transmission coil antenna.

3. The system according to claim 2, wherein said transmitting means transmits an instruction signal including a different identification code to each of said sensor units, while said sensor unit transmits a transmission signal including said identification code in response to said instruction signal.

4. The system according to claim 1, wherein said monitoring unit makes said plurality of transmitting means transmit said instruction signals at timings different from each other.

5. The system according to claim 1, wherein said monitoring unit further includes passenger detecting means for detecting that a passenger exists in the interior of said vehicle, and said monitoring unit transmits said instruction signal to each of said sensor units when said passenger detecting means detects that the passenger exists in the interior of said vehicle.

6. The system according to claim 1, wherein said instruction signal is transmitted in a manner such that a low-frequency signal having over a hundred kHz or over a ten MHz is used as a carrier.